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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,385	02/12/2004	Eric Richard Kern	RPS920030210US1	4578

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EXAMINER

LEE, CHUN KUAN

ART UNIT PAPER NUMBER

2181

DATE MAILED: 03/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/777,385		KERN, ERIC RICHARD	
	Examiner		Art Unit	
	Chun-Kuan (Mike) Lee		2181	

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☒ Claim(s) 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

FRITZ FLEMING
Supervisory PRIMARY EXAMINER
GROUP 2100
4/21/06

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 02/12/2004.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claim 15 is objected to because of the following informalities:

in claim 15, line 1, "residing" should be replaced with -storing- and

"usable" should be replace with -readable-.

please note that the request for the replacements as stated above is for the

purpose to improve the clarity of the claim language, utilizing words that are more

widely accepted in the art. Appropriate correction is required.

Claim Rejections - 35 USC § 102

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 21 is rejected under 35 U.S.C. 102(e) as being anticipated by Frantz et al. (US Patent 6,636,929).

As per claim 21, Frantz teaches a method comprising:

mounting a plurality of mass storage devices (Fig. 1, ref. 240, 245 and Fig 2, ref. 240, 245, 295) on an administrative computer (Fig. 1, ref. 200 and Fig 2, ref. 200) (col. 1, ll. 34-59 and col. 7, ll. 9-59);

presenting to a USB Mass Storage Device Interface on (Fig. 1, ref. 150 and Fig 2, ref. 150) a remote bootable computer (Fig. 1, ref. 100 and Fig 2, ref. 100) a command indicating how many mass storage devices are mounted on the administrative computer and are available for use by the remote bootable computer (col. 2, ll. 16-33 and col. 9, ll. 42-59 and col. 10, l. 56 to col. 11, l. 21), wherein the remote computer can be remotely rebooted and after implementing enumeration process in accordance to the USB standard, the USB Mass Storage Device Interface would have the information of the number of mass storage devices that are mounted on the administrative computer and can be utilized by the remote bootable computer;

disconnecting (disconnect by resetting the port) a USB Storage Device Emulator (Fig. 3, ref. 320) from the remote bootable computer while the USB Mass Storage Device Interface is reconfigured (reconfigure by implementing enumeration process) to show how many storage devices are mounted on the administrative computer and are available for use by the remote bootable computer (col. 9, ll. 42-59; col. 10, l. 56 to col. 11, l. 21 and col. 13, ll. 22-57); and

reconnecting (reconnect after implementing reset) the USB Storage Device Emulator to the remote bootable computer with the reconfigured USB Mass Storage Device Interface (col. 9, ll. 42-59; col. 10, l. 56 to col. 11, l. 21 and col. 13, ll. 22-57).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Frantz et al. (US Patent 6,636,929) in view of Chan et al. (US Pub 2003/0200428).

4. As per claim 1, 8 and 15, Frantz teaches a method, a system and a computer executable program product comprising:

a first computer (Fig. 1, ref. 200 and Fig. 2, ref. 200);

a second computer (Fig. 1, ref. 100 and Fig. 2, ref. 100) coupled to the first via a network (Fig. 1, ref. 175 and Fig. 2, ref. 175);

mounting on a first computer a required number of mass storage devices (Fig. 1, ref. 240, 245 and Fig. 2, ref. 240, 245, 295) needed by the second computer;

a storage device emulator (Fig. 1, ref. 150 and Fig. 2, ref. 150) coupled to the required number of mass storage devices and the second computer, the mass storage devices being remotely coupled to the storage device emulator via the network (Fig. 1-2 and col. 10, l. 56 to col. 11, l. 21);

means for dynamically emulating the required number of mass storage devices in the storage device emulator (col. 10, l. 56 to col. 11, l. 21); and

remote rebooting of the personal computer (PC) (col. 2, ll. 16-33).

Frantz does not expressly teach a method, a system and a computer executable program product comprising means for booting the second computer utilizing the emulated mass storage devices in the storage device emulator.

Chan teaches a method, a system and a computer executable program comprising means for booting a client computer system (second computer) utilizing the mass storage devices in the control computer system (first computer) ([0072], [0075] and [0080]).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Chan's remote booting of the client computer system (second computer) utilizing the mass storage devices on the control computer system into Frantz's computer interconnecting system. The resulting combined references teach the remote booting of the client computer system (second computer) utilizing the emulation of the control computer system's (first computer) mass storage devices by the storage device emulator.

The suggestion/motivation for doing so would have been to provide the client computer system different remote booting program to meet different requirements, therefore reducing cost of the client computer system, while providing efficient utilization of the interconnecting network bandwidth ([0004] and [0091]).

Therefore, it would have been obvious to combine Chan with Frantz for the benefit of reducing cost of the client computer system by remotely providing different booting program to meet different requirements and efficient utilization of the interconnecting bandwidth.

5. As per claims 2, 9 and 16, Frantz and Chan teach all the limitations of claims 1, 8 and 15 respectively as discussed above, where Frantz further teaches the method, the system and the computer executable program product comprising assigning (enumerate by assigning a number to each connected devices) a logical unit number to each of the mass storage devices, wherein the storage device emulator communicates with each of the mass storage devices by identifying the logical unit number (device number) of the mass storage device being utilized (Frantz, col. 9, ll.42-59 and col. 10, l. 56 to col. 11, l. 21).

6. As per claims 3, 10 and 17, Frantz and Chan teach all the limitations of claims 1, 8 and 15 respectively as discussed above, where both further teaches the method, the system and the computer executable program product comprising wherein the storage device emulator communicates with the required number of mass storage devices by wrapping a Universal Serial Bus (USB) protocol data from the second computer in a Transmission Control Protocol/Internet Protocol (TCP/IP) packet (Frantz , col. 7, l. 46-59 and Chan, [0079], [0094]), wherein the connection between the emulator and the second computer utilized USB protocol and data must converted into a network packet conforming to the TCP/IP protocol before transmitting over the network, therefore the USB protocol data must be converted into the TCP/IP protocol by being wrapped in a TCP/IP protocol in order to be transferred over the network, from the second computer to the first computer.

7. As per claims 4-6, 11-13 and 18-19, Frantz and Chan teach all the limitations of claims 1, 8 and 15 respectively as discussed above, where Frantz further teaches the method, the system and the computer executable program product comprising:

wherein external USB peripherals devices may be connected to the second computer (Frantz, col. 8, l. 58 to col. 9, l. 33);

wherein internal peripheral devices, comprising CD-ROM (Fig. 1, ref. 240 and Fig 2, ref. 240) and floppy drive (Fig. 1, ref. 245 and Fig 2, ref. 245), are connected to the first computer (Fig 1-2);

wherein external peripheral device may connected to the first computer through a suitable port or connection (Frantz, col. 7, ll. 15-32); and

therefore, it would be obvious to have the first computer's massive storage device comprising CD-ROM and floppy drive to be external USB peripheral devices, connected to the first computer through a USB cable.

8. As per claims 7, 14 and 20, Frantz and Chan teach all the limitations of claims 1, 8 and 15 respectively as discussed above, where Frantz further teaches the method, the system and the computer executable program product comprising wherein the network coupling the mass storage devices with the storage device emulator is a secure administration network (Frantz, col. 1, ll. 34-59).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671. The examiner can normally be reached on 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fritz M. Fleming can be reached on (571) 272-4145. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

C.K.L.
03/13/2006

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